DOCUMENT RESUME

ED 090 551 CS 201 205

AUTHOR	Smith, Nila Banton, Ed.; And Others
TITLE	Areas of Research Interest in the Language Arts.
INSTITUTION	National Conference on Research in English.; National Council of Teachers of English, Urbana, Ill.
PUB DATE	52
NOTE	39p.; Published and distributed by NCTE from its former office in Chicago; reprinted from "Elementary English," Jan.-April 1952
EDRS PRICE	MF-$0.75 HC-$1.85 PLUS POSTAGE
DESCRIPTORS	*Educational Research; Elementary Education; English Instruction; *Language Arts; *Language Development; Language Skills; *Research Needs; *Teaching Techniques

ABSTRACT

This document attempts to highlight strong currents of educational thought prevalent in the early fifties and to point out broad implications for needed research in the language arts field. Chapters include: "Needed Research in Language Expression," which discusses vocabulary growth and use, sentence structure, and semantic problems; "Needed Research in Reading," which presents a long list of reading problems which need answering; "Needed Research in Speech," which considers needed areas of research in speech education and speech pathology; and "Needed Research in Listening," which treats the factors influencing listening in and out of school. (RB)

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Areas of Research Interest in the Language Arts

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Prepared by a Committee
of the
National Conference on Research in English
NILA BANTON SMITH, *Chairman*
LOU LA BRANT
WILLIAM S. GRAY
KENNETH SCOTT WOOD
HAROLD A. ANDERSON

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A Research Bulletin of the
NATIONAL CONFERENCE ON RESEARCH IN ENGLISH

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AREAS OF RESEARCH INTEREST IN THE LANGUAGE ARTS

Prepared by a Committee
of the
National Conference on Research in English

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Published by the
NATIONAL COUNCIL OF TEACHERS OF ENGLISH
211 W. 68th St.
Chicago 21, Ill.

Reprinted from
Elementary English, January to April, 1952
An Official Publication of the National Council of Teachers of English
JOHN J. DEBOER, Editor

Price, 50 cents each. 35 cents each for 10 or more

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Areas of Research Interest in the Language Arts

FOREWORD

NILA BANTON SMITH[1]

With new currents of educational thought, new research needs emerge. Flashes of intuition, fresh insights, growing convictions lead us to initiate new practices, to arrange new environments, to prepare new materials. Research must precede, accompany, or follow these changes in order that we may check hypotheses, evaluate practices, and sense the direction of modifications.

The language arts field is of basic significance not only in learning but also in living. Language symbols furnish the medium which enables us to participate in the thought life of the world and also to make appropriate social adjustments. Since the use of language is so essential both to effective learning and to social living, it is small wonder that hundreds of studies have been conducted in this area during the last three or four decades. Hundreds more, however, are needed at the present time. Research needs in this field are so numerous, so pressing, and so varied that considerable acceleration in rate, quantity, and quality of production is not only justified but demanded.

It is thought that those interested in participating in research in this area may find some provocative ideas in a brief summary of strong currents of educational thinking which are shaping research needs at this time. A discussion of some of these currents will be given below, and their broader implications will be pointed out, leaving the more specific problems for discussion in the sections that follow. For the sake of brevity these educational concerns which are so strongly influencing research at the present time will be called "Areas of Research Interest."

Continuity of Growth

The day of recognizing the whole child dawned before the day of recognizing the child's whole life. All phases of growth are related to beginnings which take place before the child becomes associated with any one teacher, and with endings which will be realized long after his association with her is terminated. Knowing the whole child should carry with it the implication of knowing the child's whole life.

The concept of growth as a continuous process extending throughout the life of an individual, rather than one which can be pigeonholed into separate grade levels, is one of the currents of educational thought which is cutting most deeply into school practices at the present time.

Research has made its impact felt in developing this concept, and the concept in turn has strongly influenced research. Insofar as the language arts are concerned, however, this interaction scarcely has been felt as yet.

The majority of studies which have been conducted in the language arts area have had to do with segments of child life. Studies which embrace several years of growth would yield curves which would enable us to predict *what* will happen *when*. Seeing an entire picture of child growth as it proceeds over a period of years would be revealing in regard to

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times at which we might expect the most growth and consequently periods in which we would be safe in providing more intensive learning situations in different aspects of language development. These long-time views of child life would be helpful also in removing pressures and anxieties from expectations of regular year by year increments of growth on the part of children in separate strands of the language arts.

The uses to which the results of longitudinal studies may be put are so numerous and so significant that their importance cannot be over estimated. In the future this concept of continuity of growth will, without a doubt, be one of the most influential factors in shaping investigations in this field. We particularly need more long-time studies of language development, of language needs, and of language uses.

Interrelationships

Another strong current of educational concern at the present time is directed toward a recognition of the interrelationships of language growth with other growth factors. Enough research has been done so far to indicate that language development is related, respectively, to physical development, to mental growth, to emotional maturation, to social adjustment, and to experiential background. While a few studies have been completed, there is urgent need for many more investigations which will throw into relief as yet unknown factors concerning relationships of language with these other fundamental aspects of child development.

Some studies also have been conducted with results which indicate that there are interrelationships among the various components of the language arts constellation itself—reading, spelling, oral and written composition, speech, and listening. While possibilities have been tapped in this area, a great deal remains to be done. We need to know which strands of the language arts develop best in conjunction with the others, and under what conditions. We need to know what skills are common to all of the language arts and which ones are different for certain ones. We need particularly to know whether those that are different develop best when they are pulled out for special attention or when they are left embedded in the constellation.

While differentiating studies in regard to separate strands of the language arts are needed as indicated above, there is also a very urgent need for studies of the child's general language development. No doubt some significant relationships are evading our recognition because the preponderance of studies in the past have been concerned with isolated strands rather than with constellations.

This entire area of language relationships is a challenge to those interested in research.

Group Dynamics

The releasing of powerful forces through interaction of group thinking is another strong current of interest at the present time. Since group relationships imply the use of language media, this concern spotlights an area of research which calls for many new studies in language arts.

What types of relationships between parent and child, between teacher and pupil, between pupil and pupil are conducive to language growth? What effect does the social climate of the classroom have upon language development? What effect does size of class have upon language growth? What are the effects of heterogeneous rather than homogeneous grouping upon language? What effect do different patterns of grouping within a classroom have upon language growth? What effect does approval or disapproval of the group have upon language expression? How does the child's language abilities affect his status in the group?

This is practically a pioneer field for research, and one of great importance. Un-

doubtedly human relations and language function will pair in many significant researches of the future.

Social Change

Society is in a state of rapid change. Indications are that change in the future will be even more rapid and more dynamic in generating powerful influences and in evolving increasingly complex patterns of living.

These shifts in social forces and patterns call for changes in education. Just what provisions education should make for meeting departures from the past and innovations of the present and future is one of the gravest of the current concerns of school people. Regardless of what educational measures are provided to help youth and adults in adjusting to and improving the changing social order, we may be sure that language will have a fundamental role to play. For this reason the interest area of social change is replete with possibilities for research in the language arts field.

Changes in the mass media of communication, in themselves, are a challenging topic for investigators. To what extent is television molding public opinion? The same question might be asked concerning each of these other communication agencies: Radio? Movies? Newspapers? Magazines? Books? How can we develop more discriminating tastes for the better types of content which each of these agencies has to offer? How can we develop critical thinking in regard to the offerings of each of these different agencies? How can we increase sensitiveness to propaganda and slants in the content of television, radio and movie programs, and in printed materials? What kinds of material and what types of presentations would best serve each of these agencies in promoting better understandings among people—our own and those of other countries? What is the relative effectiveness of television, radio, movies, and books for instructional purposes? What kinds of instruction might each serve best? What types of individuals might profit most as a result of instruction provided by the use of a certain one of these media, or a certain combination of them? These and many similar problems in regard to mass language media await further study.

The separate strands of the language arts should be re-examined in terms of social change. Which strands will be most prominent in the future? What skills will be most needed in these prominent strands? What can schools do to prepare for greater emphasis which certain skills will receive in the changing order? What is the effect of television on the development of vocabulary? Reading? Language expression? Listening? What is the effect of radio or movies on each of these language arts strands?

The effect of social change on interests offers many leads to investigators. How do different aspects of social change affect the reading interests of adults? Of children? How does social change affect the listening preferences of adults? Of children? How can we best utilize the more worthy interests brought about by social change? How can we guide undesirable interests springing up from changing media of communication?

Problems needing investigation in this interest area are legion. A few very significant studies have been conducted in regard to the language arts and social change. In general we might say, however, that the great wealth of possibilities in this field remains to be explored.

Environmental Influences

The need for providing a rich, stimulating, permissive school environment is one of the most popular topics of discussion in current educational forums and periodicals. While realization in many situations falls far short of the ideal, the principle seems to have general acceptance and enthusiastic support.

Several studies already have been made to ascertain effects of various environmental factors upon vocabulary, quantity and quality of

oral expression, and reading ability. Relationships have been explored between these strands of the language arts and such factors as: socio-economic status; richness of experience; age of associates; specific types of situations; and bi-lingualism in the home. The great preponderance of such studies, however, have been conducted with pre-school or beginning school children. We need many more studies of these types with individuals at all levels, and extending over longer periods of time. We need not only to know what and how environmental factors affect language at a given stage, but we need also to know at what stages certain factors are most potent.

From the teaching standpoint we need to know a great deal more about the effect of various factors in the school environment itself, upon language development as a whole, and upon its separate strands. Which of the experiences, possible for schools to provide, are most conducive to language growth? What are the relative effects of a rich reading environment *versus* a meager reading environment upon reading ability? Upon vocabulary? Upon composition? What is the effect of providing abundant and varied media for use in creative self-expression (in art, construction, music and rhythm—separately or together) upon creative language expression? What is the effect of providing many different levels of experiences and materials for any one group *versus* the provision of experiences and materials clustered more or less about some particular level? What effect does the teacher's own language ability and language interests have upon children's language development? Does the provision and use of visual aids contribute to language growth? If so, which strands of the language arts benefit the most and under what conditions?

These are but a few illustrations of general problems relative to school environment and language development. Hosts of others await study, exploration and experimentation.

Developmental Sequences

The child psychologists have been making studies in regard to developmental cycles in child growth for some time, and they have been calling our attention particularly to the significance of physical growth cycles. In skill development areas, however, we as teachers set up empirical sequences and abide by these sequences unquestioningly even though we have no evidence that these accepted sequences are the best ones.

We need especially to find out more about developmental sequences in the language arts field. Is this the right sequence for beginning reading: observation and experience with much verbalization; then naming of pictorial symbols; then reading word symbols in experience charts? Is this the right sequence for language expression: much oral communication; then written communication without attention to formalities; then gradually giving consideration to spelling and grammar? Is this the right sequence for learning to write: poster painting with large sheets of paper and brushes; then black-board writing; then writing on large pieces of paper with wide spaces, using pencils having soft-leads and sizable circumferences; then writing with regular-size pencils on paper with increasingly narrower spaces?

Some sequences such as those mentioned above seem to be sensible. Others which are in use seem questionable in terms of our combined knowledge of child development and skill development. This whole matter of sequential patterns should undergo a thorough probing, out of which existing practices may be evaluated and new patterns evolved.

Conclusion

In the above discussion of "Areas of Research Interest," the writer has attempted to highlight strong currents of educational thought at the present time, and to point out broad implications of these currents for needed research in the language arts field.

The ensuing articles in this series reflect these "Areas of Research Interest," also. These sections, however, deal with specific problems in regard to some of the separate strands of the language arts. Dr. Lou LaBrant and collaborators have discussed needed research in language expression. Dr. William S. Gray has stated several problems which need to be investigated in reading. Dr. Harold Anderson has set forth research needs in listening. Dr. Kenneth S. Wood has summarized pressing problems in need of investigation in speech.

All strands of the language arts abound in fascinating possibilities for significant research. If this series is instrumental in stimulating others to undertake needed investigations in regard to strands discussed within these pages, then its function will have been fulfilled.

Needed Research in Language Expression

LOU LABRANT[1]
FRED MARCUS[2]
ERWIN R. STEINBERG[3]

The use of language in written composition involves not only the putting of words into sentences and the arrangements of those sentences, but the acquisition and selection of appropriate words and some understanding of more than their literal meaning. Consequently the problems of composition include vocabulary study and growth, and consideration of semantic understandings as well.

Even a casual examination of the research which has been done in the field of teaching writing or (conversely) of learning how to write, reveals the inadequacy of our present knowledge and understanding. A large proportion of the studies on composition have dealt with the occurrence and correction of errors in punctuation and usage, but only a small body of work on the deeper and more difficult problems exists. We have some literature on the selection of theme topics, but in general these are surface listings only. For example, such commonly listed topics as pets, games, or trips are probably symptomatic of deep interests or questions such as a yearning for something to love, a satisfaction in group activity, or desire to escape present difficulties. Interpretation and probing of expressed interests is still to be made. The literature on association and projective techniques is related to testing and personality study and not to the stimulation of writing.

The problems suggested in the following paragraphs cannot cover the field of composition and language growth, but are presented as suggestive, to serve as stimuli to anyone interested in the field of investigation. The suggestions may also indicate to some teachers the fact that we are teaching a highly complex and important form of behavior without as yet knowing, in many cases, whether our methods are or are not in line with normal growth or whether or not our teaching is conducive to mental health.

Vocabulary Growth and Use

Most vocabulary studies to date have had to do with the size of vocabulary at various age levels, or with attempts to find what words are

[1]School of Education, New York University.
[2]Crescent School, Brooklyn, New York.
[3]Carnegie Institute of Technology.

common to the vocabularies of children at given grade levels. We need in addition studies which will throw light on language growth in terms of experience, use, and understanding. The following are suggestive only:

1. If the findings of Mary Katherine Smith[1] and others even approximate the truth, what are the probable common elements? From, for example, 16,000 words used by each of two given youngsters, which ones are common? What determines the diversity?

2. Studies of words *used* in school compositions and of words *known* by school pupils point to a large unused vocabulary for the individual child. How are the related experiences to be tapped, or are they of no importance to the progress of writing?

3. What effect does the limitation of words in the preparation of school texts have upon the expression of the pupil through writing? To illustrate, does the fourth grade child tend to limit his writing to the words he has found in his textbooks?

4. How do the vocabularies of told stories differ from the vocabularies in written compositions? Would an increase in oral composition, free as it is from spelling problems, eventually affect the range of expression in writing?

5. How long does it take the average child in second, third...eighth grade to copy with moderate accuracy one hundred words, two hundred, three, etc? In the light of such physical limitations, how long a story or other composition can he write in an hour, discounting time for selection and organization of ideas? What is the effect on style, fluency, and artistic quality when a part of his composition is dictated or written on a typewriter? There is some evidence (based on only a few studies) that typewriting greatly increases the quantity of composition after the fourth grade. The whole area of the relation of ideas to physical limitations in recording has been scarcely touched. Present recording devices open a large field for research. Possibilities of combining writing and tape or wire recording have not been explored.

6. What is the relation of fragments of sentences to (a) such physical problems as are suggested in the preceding paragraph, (b) to lack of understanding of the matter to be discussed, or (c) to lack of interest in the writing? A few informal experiments with writing which is on pupil-chosen topics, undertaken with understanding of the subject and with enthusiasm, indicate more ability to write complete statements than our present literature on teaching would imply. Stated conversely, there is some evidence that many fragmentary sentences result from incomplete understanding of what is being talked about, or from poor motivation. The problem should be explored carefully and with sufficiently large groups to offer some conclusive evidence.

7. What is the effect on word-choice and clarity, of first-hand experience such as is provided by trips, work in shops and art rooms, gardening, care of pets, etc.? Anderson[2] found that college students wrote with a better style and organization as the story approached their real experience. Similar studies need to be carried on at other levels.

8. What is the effect of wide reading on use of words in composition? The statement is frequently made that reading develops vocabulary of themes.

[1]Mary Katherine Smith, "Measurement of the size of General English Vocabulary through the Elementary Grades and High School," *General Psychology Monograph* XXIV (August-November, 1941), (Second Half), 311-345.

[2]Edward L. Anderson, *A Study of Short Stories Written by Students in College Composition Classes to Determine Relationships between the Prior Experiences of the Students and Their Treatment of Setting and Character.* Unpublished Doctoral Dissertation, New York University, 1950.

9. What is the effect of emphasis on spelling upon fluency in writing?

10. What is the relation between word-selection (discrimination in selection) and expert knowledge in a field? Does the student who writes vaguely on one topic show a different discrimination when dealing with something about which he is concerned and informed?

11. Is there a distortion of an idea in putting it into words (specifically into English)? We have often said that writing is a method of clarifying an idea. Under what circumstances is this likely to be untrue? Whorf, Malinowsky, and Korzybski have opened up this area, but much is to be done. Studies need to be made, for example, of how concepts of time, space, causality, subordination, and coordination, as they occur in the pattern of the English language, structure thinking.

A difficult related problem is that of keeping the idea flexible (pre-verbal?) while writing is going on. This follows directly from the problem of the previous paragraph. In cases where language distorts thought, can students learn how to keep their ideas pre-verbal while they are being formed? Here is a difficult problem for investigation, probably with advanced students.

12. What is the relation between the student's vocabulary, idiom, and locutions and the instructor's? The small child must learn vocabulary and structure from his family. Such learning is rapid and effective. One college teacher, for example, reports that often he can recognize another instructor's speaking personality in the writing of that instructor's students. This problem is, of course, related to a study of the effect of reading upon the style of the young writer, even in those cases where no conscious effort to imitate is involved.

13. Do individuals have "linguistic profiles"? Baker's[6] study provides the possibility for many studies. Is it possible that to discourage specific linguistic habits in certain individuals is as dangerous as to make those who are left-handed write with the right hand?

Suggested also by the work of Baker are studies dealing with repetition, and studies of long-term word analyses, such as he developed, for individual students whose work may be available over several years.

Sentence Structure

Despite much discussion about the improvement of structure, and an enormous quantity of exercises on grammar, we still do not have a clear picture of the role of growth in the development of structure patterns. The steps by which the infant moves from the one-word, two-word, and finally the simple verb-subject clause to the complicated structure he can use later are only slightly known. Less than a dozen published studies to date attempt to picture changing structure beyond the third year of life, and existing studies are general and based on small samplings. Obviously one would not attempt to teach a child of fifteen months to use a full sentence if he were talking in one-word sentences. We have many questions to answer for the older individual, as for example:

1. To what extent, if any, is the "and," the comma-splice, or the run-on sentence indicative of the child's interpretation of what he really sees or understands?

2. To what extent, if any, is the frequent use of "and" to join sentences or clauses a step between the use of a series of simple sentences (relationships not expressed at all) and the complex sentence (relationships seen as involving subordination)? Piaget's work, which opened this problem twenty-five years ago, has not had adequate follow-up.

3. What is the current pattern of adult sub-

[6]Sidney I. Baker, "The Pattern of Language," *Journal of General Psychology*, XXXII (January, 1950), 25-66.

ordination as it appears in our better edited magazines? Does it differ from writer to writer? From subject to subject? What patterns do various writers of distinction use? Are these consistent from page to page?

4. In the free writing at the various age levels, is there any uniformity in the use of tenses? At what age, for example, may we expect to hear the perfect tenses? What needs for more than simple past, present, and future are evidenced in the written work of children at various age levels?

Similarly, what are the tense problems found in the writing of high school and college students? (Note that "problems" is not a synonym for "error" in this case.)

5. In what constructions do students of various age or grade levels use relative pronouns? What problems of word-order are indicated?

Semantic Problems

Composition is, of course, far more than the preparation of properly constructed sentences and the use of carefully selected words. We frequently claim that written composition is a means by which thought is disciplined. Needed research would indicate at what age levels and by what means the following skills might be developed:

1. The ability to recognize that the word is not the physical object it describes.
2. The ability to recognize that a single member of a species or group is not identical with any other member of that species.
3. The ability to distinguish between facts and judgments.
4. The ability to recognize "slanting" of written material through the use of emotionally charged language.
5. The ability to recognize that the connotations attached to a particular word are dependent upon the individual's previous experiences with that term.
6. The ability to recognize shifts of meaning when they occur.
7. The ability to recognize abstractions which fail to communicate completely.
8. The ability to recognize that there are varying levels of abstraction.
9. The ability to recognize that contexts determine meanings and shades of meanings.
10. The ability to arrive at conclusions based upon specific data.
11. The ability to organize data into prescribed patterns or forms of written communication.
12. The ability to shift judgments when the introduction of new data makes such shifts feasible.
13. The ability to recognize the fallibility of the over-simplified, two-valued orientation, utilizing either-or alternatives.

We need also research to discover to what extent writing skills and attitudes are general qualities of an individual's style. A writer may excel in style of writing fiction and be a poor writer of biography. To what extent are the semantic skills just listed limited to specific types of writing and specific fields of thought? For example, such a problem as the following might be examined:

> Given a course presenting one of the skills just listed, and taught with immediate success (i.e., success within the class limits), does the technique of analysis carry over into work done in concurrent science or social science courses?

Further research lies in the field of measurement. We need to have devised tests to measure semantic values, and other aspects of critical thinking. To date much of such experimentation has been done by others than teachers of language. We need, also, the preparation of material illustrative of sound thinking at various levels of growth.

Conclusion

It is evident from the brief statement above that many problems dealing with written expression require a considerable knowledge of biology and psychology. This is not strange when we consider that language is the chief human means for communication, and that spoken language on which the written depends involves the whole physical system. Language can produce emotional effects which change body temperature, blood content, and rate of heart beat. Spoken language uses a congeries of muscles, nerves, and blood vessels, and writing calls for eye-hand coordinations of a high order, regulated by the mechanisms of speech. When in addition we remember that language organizes and structures thought, it is small wonder that today we have a slight beginning only in the field of research in writing.

Needed Research In Reading

WILLIAM S. GRAY[1]

Two efforts are made in this chapter to identify reading problems that merit intensive study today. In the first place, attention is directed to types of problems that have previously been recommended for investigation and which are still in need of further study. Those listed are typical of the problems that rank high in a long-range program of research in reading. In the second place, a series of challenging problems are presented which are of special significance today as effort is made to improve reading programs and to develop greater competence in reading in response to current demands.

Previously Recommended Problems

Several facts should be kept in mind as we review the types of reading problems that have stimulated research in reading in the past. We should recall, first, that scientific studies of reading began about a century ago as a result of sheer curiosity on the part of psychologists concerning such matters as the behavior of the eyes in reading and how words are recognized. We should keep in mind, too, that the scope of research in reading began to increase rapidly only about four decades ago as the personal and social needs for reading expanded and as new and challenging problems were identified in the classroom and in the library.

During the last four decades individuals and groups have pointed out, from time to time, specific issues which in their judgment were in need of intensive study. Evidence that such proposals were very fruitful is found in the nature and scope of the research that followed each such proposal. In the discussion that follows, attention will be directed to the major areas of research represented, to the motives that led to research in each, and to specific problems that merit further study today.

1. *Problems Relating to the Nature of the Reading Act.* Most of the early research in reading focused attention specifically on the nature of the reading act, the processes involved, and the factors that influence their development. Added stimulus to studies of this type was provided by Huey's[2] excellent summary in 1912 of what was then known about reading and the problems that merited further study. As a result, several penetrating investigations were organized and completed during the decade that followed. Their nature and scope are admirably illustrated by the following titles

[1]Director of Research in Reading, University of Chicago.

[2]Edmund B. Huey, *The Psychology and Pedagogy of Reading*. New York: The Macmillan Company, 1912.

which appeared in a single momograph series:[3] *Reading: Its Nature and Development; An Experimental Study of the Eye-Voice Span in Reading; How Numerals Are Read; Fundamental Reading Habits: A Study of Their Development; and Silent Reading: A Study of Its Various Types.*

The chief argument advanced in support of such studies was that they are concerned with "basic facts and principles essential to a sound theory and practice of teaching reading." Certainly the results of the studies referred to above led to radical changes during the twenties in the scope and organization of reading programs, in the nature of the learning activities provided, and in the kinds of guidance given. During the last two decades research concerning the nature of reading, its fundamental processes and their interrelationships has continued to increase rapidly. Such studies are often referred to as basic reasearch in contrast to the study of specific classroom problems. The examples which follow suggest the variety of so-called basic research problems that have been attacked recently and which still merit intensive study.

1. What are the aspects of intelligence that most directly influence progress in learning to read and in interpreting what is read?

2. To what extent can breadth and depth of interpretation in reading be acquired by pupils of varying levels of general mental ability?

3. What is the role of imagery in interpreting what is read? How can teachers promote the development of types of imagery essential to clear, vivid experiencing of meaning when reading?

4. To what extent do the competencies involved in reading different kinds of material and for different purposes vary in kind; to what extent do they overlap and depend upon some common factor or factors?

5. To what extent does ability to grasp the author's organization of ideas, to draw inferences from and to react critically to what is read depend upon competence in perceiving words accurately and in grasping the sense meaning of passages?

6. What effect does training in one type of reading, such as skimming, have upon ability to engage effectively in other types of reading, such as grasping details accurately, seeing implications, and reacting critically or appreciatively to what is read?

7. What is the relationship between rate of thinking and rate of reading? What is the relative importance of rate of thinking and other factors, such as an adequate meaning vocabulary, on rate of reading?

8. How is speed of reading related to and to what extent does it affect the comprehension of various types of material—popular articles, fiction, editorials, science, philosophy—and in reading for various purposes?

9. To what extent can the claims made for bibliotherapy be validated for different types of personalities and through the use of different kinds of material?

10. Are reversals in reading due merely to difficulty in differentiating among symbols that are similar in form or are they due to some more basic or subtle factor or factors?

2. *Practical Issues Faced in Teaching Reading.* A second broad area of research in reading includes many so-called "practical problems" which teachers face in organizing reading programs and in teaching pupils to read. One of the early efforts to prepare a list of such problems was made by the National Committee on Reading[4] in 1924. Three of the thirty-eight

[3] Supplementary Educational Monographs, Nos. 10, 17, 18, 21 and 23. Chicago: University of Chicago Press.

[4] *Report of the National Committee on Reading, Chap. XII.* Bloomington, Ill.: The Twenty-fourth Yearbook of the National Society for the Study of Education, Part I, 1925.

problems listed follow: "How should classes be organized to provide for the maximal development in reading of each child in harmony with his interest, tastes and capacities without undue interference in waste?" "What are the specific techniques involved in work-type reading in each subject of the curriculum?" "What effects on reading interests, attitudes and appreciations are secured by (1) unsupervised reading and (2) carefully directed supplementary reading"?

The importance of such problems in a program of reading research was emphasized in 1939 by Holmes. He pointed out that "research in reading starts . . . with very definite and practical difficulties in the work of schools and other educational organizations. It has to take into account, of course, the nature and development of children, and it is dependent also on research in many other areas; but it begins with the problems which all teachers face who use books in their instruction, and to these problems it must finally return. The obstacles and puzzling situations which confront teachers of many subjects at many levels provide, therefore, the issues to be resolved by research in reading; these issues may be sharply defined as issues of practice; and however far afield our research may be forced to go, its value is determined in the end by what it reveals about what to do in teaching children (or adults) to read."[1]

A surprisingly large proportion of the scientific studies of reading which have been reported during recent years were either carried on in the classroom or had their origin in the problems faced in classrooms. The examples that follow were selected from Holmes' list and from more recent proposals. They are typical of hundreds of classroom problems that await solution.

1. When should the teaching of reading begin under varying school conditions and with different types of pupils?

2. What are the requisites of readiness for reading and how can evidence of their attainment be identified most effectively under current classroom conditions?

3. "Will children progress faster when the vocabulary burden is kept relatively light or when it is made relatively heavy?" In attacking this problem clear distinctions should be made between progress in early and subsequent stages of reading and in different aspects of reading.

4. "What types of errors are related to different kinds of phonic instruction" and how can they be prevented or eliminated?

5. To what extent and in which areas, if any, can teachers rely safely on the training provided in reading classes to develop a high level of competence in study activities?

6. In what respects should the techniques used in guiding reading activities in the respective school subjects differ from those used in teaching pupils to read in reading classes?

7. What procedures are most effective in securing such effects through reading as "increased understanding of a problem or topic", "changed attitudes toward a different class or group", or broader interests?

8. What are the relative advantages and disadvantages of group therapy and self-directive techniques in overcoming emotional disturbances that retard progress in reading?

9. What are the essential characteristics of a classroom environment that will stimulate interest in reading and promote thoughtful interpretation of what is read?

10. By what procedure can the quality of oral interpretation be improved among pupils at successive levels of progress?

3. *Problems Relating to the Reader.* A third

[1] Henry W. Holmes, "Research in Reading," *Educational Research*, p. 83. American Council on Education Studies, III, No. 10, Washington, D. C.: American Council on Education, 1933.

group of research problems is concerned chiefly with the reader, that is, with his various characteristics and their influence on his progress in learning to read and his competence in later reading activities. Such studies are justified on the ground that teachers must understand the child as a potential or developing reader if they are to guide him effectively in his growth toward maturity in reading. Problems of this type began to receive specific attention during the middle and latter part of the twenties as the importance of reading readiness and the problems faced by the poor reader were recognized. They increased rapidly during the thirties, both in number and variety as research relating to the characteristics of individuals expended. Within the last few years scores of studies have been reported in this area, the results of which have modified both the nature of the reading programs provided and the kinds of guidance given. The problems listed here are typical of the larger number that merit further study. Some may be classified as basic research problems and others as practical classroom problems.

1. To what extent does a child's growth in reading parallel or depart from his general pattern of growth? What are the factors that make for variations in this relationship?

2. Which personal characteristics of individuals—mental, social, physical and emotional—definitely facilitate progress in reading and which contribute to serious reading retardation?

3. What are the personal characteristics that differentiate boys and girls and to what extent are these differences responsible for the fact that boys in the lower grades tend to encounter more difficulty in reading than do girls?

4. How do boys and girls differ in the ease or difficulty with which they learn through different avenues—visual, auditory, kinaesthetic—and how do these differences influence the methods that should be used in teaching individuals to read?

5. What are the types of personalities that develop into superior readers, on the one hand, and into seriously retarded readers, on the other?

6. What is the nature and range of the reading interests of children at specific levels of advancement and how may they be provided for and used to best advantage in a well-planned reading program?

7. Since children differ significantly in verbal facility and capacity to learn through printed symbols, what is the relative emphasis that should be given to reading and other aids to learning in achieving the goals of schooling among pupils who differ in these respects?

8. To what extent and in what aspects of reading are norms of achievement appropriate for children at given age or grade levels?

9. What are the most effective ways of providing for individual differences among pupils when teaching reading at given grade levels?

10. To what extent do children vary in verbal capacity, and what are the implications of these differences with respect to methods of teaching reading and the extent to which reading should be used as an aid to learning among pupils of limited verbal capacity?

4. *Reading Problems at Specific Levels.* A fourth effort to define reading problems has been made by individuals and groups whose interests focus upon readers at various levels of maturity or school progress. In his discussion of needed research in reading, Holmes[9] called attention to the fact that there are reading problems that are "mainly distinctive of primary-grade instruction", "those chiefly met in the middle grades" and those "of pressing importance in high school, college and later." Support for the foregoing contention is found in the fact that scores of problems relating to the readiness of young children for reading, the factors that influence it, and methods of pro-

[9]Ibid, p. 90

moting readiness of various kinds have been recommended for intensive study during recent years. One of the most detailed proposals for research in reading at a specific level was prepared by a Committee on Reading in General Education (Secondary School Level) for the American Council on Education, in 1939. The problems recommended for study follow:

1. What are the major functions that reading serves in secondary schools and what is the nature of the demands made on the reader?

2. How does reading effect and in what ways is it influenced by other types of experience and aids to learning in specific study activities?

3. In what ways and to what extent are reading, language and thinking interrelated, and what are the implications of these facts for improving reading in secondary schools?

4. What are the merits and limitations of different types of reading programs in junior high schools, senior high schools and junior college?

5. What are the nature and variety of the reading problems that arise in the respective curriculum fields and the kinds of guidance essential in increasing reading competence in each field?

6. What are the adjustments essential in the difficulty of the reading materials needed in different content fields by students of varying levels of reading ability?

7. What types of corrective and remedial training are needed by deficient and seriously handicapped readers?

8. How can the reading interests of secondary-school pupils be increased and their reading tastes elevated, and what are the conditions that make for permanency of desirable reading interests after students leave school?

9. What are the nature and variety of the measuring devices needed in making a valid appraisal of reading achievements and in evaluating the effectiveness of the instruction provided?

10. What is the nature of the in-service training needed in acquainting secondary-school teachers with the reading problems which they face and in developing skill in dealing with them?

Since the foregoing list was prepared, many of the problems included have been studied to a greater or less extent. Few, if any, of them have been fully solved. The list serves, therefore, as a fairly adequate guide today to needed research in reading at the secondary level. It suggests, also, types of problems that are in urgent need of study at other levels.

The discussion thus far has directed attention to reading problems in four general areas: those that are concerned chiefly with the nature of the reading act, the course of its development toward maturity, the processes involved, the factors that influence progress, and the interrelationships of these various items; those that are concerned primarily with the specific issues which teachers face in organizing reading programs and in developing the various kinds of reading competencies needed; those that seek a better understanding of the reader and the development of reading programs adapted to his specific characteristics and needs; and those that seek to find solutions of the reading problems faced at different grade or maturity levels.

If space permitted problems relating to certain specialized areas should be listed, such as diagnosis and remediation, reading in the respective curriculum fields, interest in reading, the hygiene of reading, and evaluation of instruction in reading. Most of these areas, however, are represented to some extent in the preceding lists. The various problems to which reference has already been made from a fairly representative list of those which should be included in a long-time program of research in reading.

Problems of Special Interest Today

As one reviews the history of the scientific study of reading the fact stands out clearly that long-time programs of research in reading are supplemented at any given period by a concentrated attack upon problems of special interest at the time. These problems assume large significance for any one or more of several reasons: changing social needs; new conceptions of the function of schooling; the discovery of new problems which call for immediate solution; or the urgent need for better understanding of certain aspects of reading and their interrelationships.

The current period is not an exception to the rule. We face a variety of conditions today which give rise to a series of challenging reading problems. On the one hand, the demand made on readers has been increasing during recent years far more rapidly than schools have been able to develop the types and levels of competence needed. Evidence to this effect is found in the nation-wide demand for improved reading instruction in schools, in the urgent appeal of thousands of young people and adults for individual help in overcoming reading difficulties, and in the participation of hundreds of thousands of adults in classes which are chiefly concerned with the improvement of reading. On the other hand, new agencies of mass communication and better aids to learning have developed at a surprising rate during the last two decades. Millions of adults are now securing through the radio and television types of information that previously were available only through print. New and effective aids to learning are being used widely in schools today as a supplement to or a substitute for reading. These and other developments have given rise to a series of challenging problems which are in urgent need of intensive study today.

1. *What changes, if any, are taking place in the dominant role of reading in contemporary social life?* The fact is widely recognized that we read the newspaper less today than formerly for the flash of the minute news and more to secure the facts back of the news. Furthermore, as shown by Lazarsfeld[7] millions of children and adults have turned to the radio, and more recently to television, for many lighter forms of entertainment that formerly were secured in large part through reading. His findings suggest also that reading is a resource on which thoughtful individuals rely increasingly in their efforts to find the solution of challenging personal and social problems. Its importance is due to the fact that the reader can peruse the material at his own rate, reflect on the ideas apprehended, and come to reasoned conclusions. The examples given suggest that the role of reading is changing. To the extent that this is true, school and adult agencies should recognize the fact and should adjust reading programs to meet current needs more effectively.

2. *What are the various functions that reading should serve in the lives of different groups of people?* Previous studies have shown that the amount of reading and the specific functions served have differed in the past among people of varying ages, educational levels, and occupations. In view of the widespread use of the radio and television, and frequent attendance at movies, what is the extent and character of the reading that should be carried on by different classes of people, and, indeed, by individuals of varying capacities, interests and needs? The results of a study now in progress concerning the purposes for which individuals read are illuminating in several respects. They show that reading serves a wide variety of purposes in the lives of millions of young people and adults, that these purposes differ widely among groups and individuals, and that there appears to be both group and individual patterns of reading. Further, research is needed to secure a more adequate picture of current practices. Equally

[7] Paul T. Lazarsfeld, *Radio and the Printed Page*. New York: Duell, Sloan and Pearce, 1940.

important are steps which aim to determine more fully than is known at present the values that reading should serve today in the lives of people of varying characteristics and circumstances of life. Such information is needed if schools and adult agencies are successful in stimulating and directing the reading interest and habits of different groups of young people and adults.

3. *What is the role of personal reading in the lives of children and young people who have access to and make wide use of the radio, television and the cinema?* The rapid developments of new agencies of communication have affected the personal reading of children and young people. Some of the evidence available suggests that the interests aroused through the radio and cinema lead to a larger amount and a wider range of reading. Other studies reveal striking evidence to the contrary. More detailed information is needed concerning the effects of these agencies to date on the personal reading of children and young people. In the further study of the problem, three facts should be kept clearly in mind; first, that these new agencies have much to contribute to the enrichment of child life; second, that the values secured through reading and other aids to learning should expand in harmony with the child's increasing experience and maturity; and, third, that the guidance provided should enable the individual on leaving school to fit intelligently and effectively into adult reading activities. The need is urgent for a thoroughgoing review of the distinctive roles of personal reading and other forms of vicarious experience among children at successive levels of advancement. The facts and principles that emerge should enable teachers and parents to develop the interests, attitudes and power of discrimination essential if children are to make wise choices of media and to use personal reading in ways that will insure its greatest contribution to child life.

4. *What are the reasons why a surprisingly large number of both children and adults are not attracted to reading as a desirable form of leisure activity and how can this situation be corrected?* Closely related to the foregoing question are many challenging problems faced in establishing desirable reading interests among children and adults. The nature of some of these problems is suggested by the following questions that were discussed pointedly in a recent conference of ten social scientists:[5] Why do many children acquire a negative attitude toward reading? Why do many adults look upon reading as a high-brow activity? What are the influences that result in the present distaste for book reading? How can these attitudes be changed? No more challenging problems are faced today if reading is to continue to play a significant role in the lives of children and adults. We need added information, too, concerning positive steps that can be used to promote reading interests and habits in an age when radio, television and movies offer very alluring rewards.

5. *What are the types of growth through reading that are of greatest significance today and how can the ends sought be most effectively attained?* Throughout the history of this country the reading materials assigned in school have been selected in terms of their assumed values in promoting desired understandings, attitudes, interest and appreciations. At times religious and moral motives predominated; at other times the aim was to acquaint the reader with the expanding world in which he lived and to promote the understandings essential for good citizenships; at still other times, the chief aims were to acquaint pupils with fine selections and to develop an appreciation of good literature. The issue presented here relates to the nature of the understandings, attitudes and skills that should be promoted through reading at various levels of advancement. This question is as broad,

[5]Lester Asheim, *Report on the Conference on Reading Development,* (January 20-21, 1951), New York: Committee on Reading Development, American Book Publishers Council.

of course, as are the aims of education appropriate for the kind of world in which we are living. Further research in this area is essential before reading materials can be selected most wisely. Closely associated with this problem is the need for further research concerning the teaching procedures that are most effective in securing the ends sought through reading.

6. *What is the relative importance in specific learning situations of reading and other aids to learning, and the order in which they should be used?* The development of new and valuable aids to learning has created challenging teaching problems. The fact is known, for example, that certain things can be learned more readily in some ways than in others. We do not know as fully as we should, however, which aids to learning are most effective in achieving certain goals. Equally important is a clearer understanding of the various aids to learning that can be used to best advantage in the study of a given problem, and the most effective order in which to introduce them. Furthermore, we know that individuals vary in the ease with which they learn through different sense avenues. The need is urgent for a better understanding of the extent to which reading and other aids to learning should be used in promoting needed types of development among pupils of varying levels of intelligence. Both classroom and laboratory experiments are essential in securing added insight concerning these issues.

7. *What should be the focus of attention in developing reading attitudes and skills adapted to contemporary needs?* The fact is well known that emphasis in teaching reading has changed radically during the last fifty years. Prior to 1900, for example, the development of the habits essential in effective oral reading received chief attention. Between 1915 and 1925 major emphasis shifted from oral to silent reading. More recently emphasis has been given to the importance of breadth and depth of interpretation, the reader's reaction to the ideas apprehended, and their use or application. In the light of the major functions that reading serves in promoting child development and in meeting contemporary social needs, what are the most important reading attitudes and skills that should be cultivated through a well-planned reading program? In reaching conclusions, two facts should be kept clearly in mind: first, that growth in reading is continuous; and, second, that the reading demands made on children and youth at each level of advancement should parallel closely their increasing maturity and their expanding interests, motives and drives.

8. *What is the nature and extent of the emotional disturbances created among children and youth by the tempo and distracting conditions of contemporary life that interfere with progress in reading?* Numerous studies reported recently provide clear evidence that many children and youth suffer from emotional disturbances that often affect progress in reading. The need is urgent for more detailed and precise information concerning the nature and extent of such disturbances, what schools can do to correct or eliminate them, and the best procedures to adopt in teaching reading in the case of emotionally disturbed children. The problem is further complicated by the fact that an emotional disturbance may be due to the fact that a child is making slow progress in reading. It follows that teachers must not only be able to detect the presence of an emotional condition but be able to determine whether it is a cause or an effect of poor progress in reading. Carefully planned studies are needed to determine the most effective procedures in either case.

9. *How should instruction in reading be organized in order to provide more effectively for individual differences among pupils in each school grade or class and at the same time take advantage of the values inherent in group activities?* The fact that wide differences exist in the mental maurity, interests and other important characteristics of pupils at each grade

level has long been established. More detailed information concerning the nature and extent of these differences is needed. Furthermore, experience shows that many significant values are inherent in group activities. We need to know more fully than at present the nature of these values and the conditions under which they are attained most readily. Much informal experimentation has been in progress during recent years to determine how instruction in reading can be organized so as to take advantage of the stimulus that results from the cooperative study of a challenging unit and at the same time provide adequately for individual differences in interests and needs. Such experiments should be greatly increased in number and so organized and conducted that the relative advantages and disadvantages of different procedures can be accurately identified.

10. *What changes are essential in the reading programs of specific schools and school systems in order to adjust them better to current needs and to overcome specific weaknesses inherent in them?* The responsibility of adjusting reading programs to changing needs and the results of research is a continuous one that cannot be neglected by any school system. The need for overcoming weaknesses in a school's reading program, due to failure to provide effective instruction in all essential areas, is equally urgent. The fact that achievement in some school systems is not as high as it was formerly provides striking evidence to the effect that vigorous appraisal of reading programs is essential. In view of the nation-wide demand that instruction in reading be improved and that greater competence in reading be developed, all schools should undertake, in the immediate future, a thorough and critical appraisal of their reading programs. In the course of such efforts it is hoped that improved instruments of evaluation will be developed.

The foregoing list of current reading problems is by no means exhaustive. It focuses attention upon some of the broader issues which merit consideration today. It is hoped that the lists of problems presented in the early section of this paper give adequate emphasis to the more detailed types of studies which are of large importance today.

Needed Research In Speech

KENNETH SCOTT WOOD[1]

Since speech is biological in origin, physiological in mechanism, and predominantly sociological in function, it can be studied from several different angles. From the point of view of its evolutionary development, speech is intimately related to the biological origin of man as a species. From the standpoint of its being produced by definite action of body parts, speech is physiological in function; and, as we learn from anthropology, the more primitive the language, the greater are the evidences of its anatomical components. Observing that the purpose of speech is communication, we see it as a powerful social force in man's survival and development. We see speech as a means of expressing motivations, desires, and needs. We see how it makes possible man's extension of his wishes, his knowledge, and his ideas to others.

In the world of education speech includes such activities as reading orally, acting in a play, broadcasting, public speaking, debating, conversing, participating in organized discussion, and conducting a meeting. Many other activities are also included. In recent years speech has evinced a growing interest in the field of listening; and many speech textbooks include a considerable body of material on that subject.

Speech also includes the study and the treatment of persons with speech defects as well as related emotional problems; it includes phonetics, semantics, voice science, and has more recently allied itself very closely to the whole field of hearing on the basis that the ears are speech organs in a very real sense.

Taking the broad view, speech would encompass the entire range of the social, psychological, physical, and physiological study of communication.

In order to present specific questions and topics in the field of speech which need investigation and study, we shall divide the field into three areas which, as far as educational implications are concerned, are very closely related. Only the first two areas will be considered here.

I. Studies in *speech education*: Problems in understanding and acquiring the various speech skills.

II. Studies in *speech pathology*: Problems in diagnosing and treating the various speech defects and disorders.

III. Studies in *speech science*: Problems in the analysis of the speech processes and their relationship to other aspects of human behavior.

It is evident that such a division of the field of speech does not set up mutually exclusive areas but does establish three channels of study on the basis of the implications of three kinds of research.

Needed Research in Speech Education

The first task of an educational system is to make its pupils articulate. The problems of concept formation, personality development, social adjustment, and vocational achievement are tightly linked to the problem of learning to speak meaningfully, distinctly, responsibly, and effectively. If this is true, or even partially true, the most needed research in speech is that which can be applied educationally. We need research which will tell us something about developing and teaching speech skills in the primary, intermediate, and secondary school levels with better results than we are getting now.

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1. It is commonly observed in high schools and universities that a very large number of students have advanced through eight or nine grades without having acquired distinct articulation. Their words are not spoken clearly because the sounds in the words are not distinctly produced. When we consider that the intelligibility as well as the artistic effectiveness of speech depends first of all upon the ability to control the distinctness of articulation, we can see the possible importance of teaching the child more about speech sounds. We can see the possible need of reinforcing periodically his auditory concepts of the phonetic elements in speech throughout his elementary schooling and beyond.

Perhaps we could afford to experiment in order to discover how the pupil's speech would turn out if he were given strong units in phonetic training at every grade level with the aim of heightening and focusing his attention on speech sounds in isolation and in sequence. Such a program, if instituted on an experimental basis and under the direction of thoroughly trained teachers, might produce revealing results. This suggestion of introducing a regular phonetic program into the curriculum is not to be confused with the phonics work that frequently accompanies the teaching of reading. The phonetic training we are suggesting as an experiment is not involved with written or printed symbols, but is involved with establishing auditory concepts of speech sounds, with studying their acoustic characteristics, and with learning the manner in which they are produced; and the aim of such an experiment would not be to see if it produced improvement in word recognition and reading, but to see if the pupil would not eventually speak more clearly and have better command of the several components of oral expression.

Coupled with this experimental attempt to ingrain better articulatory habits in children would be other areas of exploration such as how to capitalize on the child's natural love of words, rhymes, and rhythm; how to initiate and perpetuate his interest in the elements of speech; and how to develop within him an awareness of language and communication in contrast to his developing speech as an automatic social function.

It would be of significance, too, if we could find out by representative sampling methods how much elementary teachers know about phonetics and oral expression in general.

2. Thousands of schools have acquired recording machines of various types, and they are being used in a variety of ways. When they are used for speech training, we raise the question as to whether or not they are being used to the greatest advantage. We need experimental evidence which will show whether or not recording devices will aid materially in helping to improve speech; and we need to investigate more thoroughly the methods by which they may be used for maximum results. One is led to feel that too often the major operating factor in the use of a recording device is its novelty.

What can be accomplished by having a person speak into a microphone and then having him listen to himself? Is a person able to listen to his own speech critically enough to thereby improve it? Should certain specific training precede the use of the recorder? Do certain aspects of speech yield more readily to change than others when a person studies his own voice recordings? What are some of the factors and conditions which should control the use of recording and listening procedures for the teaching of speech skills?

Assuming that the equipment is of high fidelity, are most people able to recognize their own speech from recordings when there are no context cues? In everyday speaking, the individual hears his own voice radiating through his head bones to his inner ear; and some of the frequencies of sound which determine his voice quality he does not hear as others do. Consequently, what he hears from a recording may

be a surprise to him. What is the psychological effect on an individual who hears his own voice for the first time? Is his speech better or worse than he originally conceived it to be? What light could be thrown on the person's speech problems by having him select from sample recordings the kind of speech qualities he thinks he has? What personality factors would be revealed by his indicating his concepts of his own speech? What is the nature of the motivating effects of working with recording apparatus for speech improvement?

While we are on the subject of microphones and loud-speaker speech, some research could be done in regard to the effect that a central sound system has on the school atmosphere. How do pupils feel about their principal whom they frequently hear over the classroom loud-speaker but seldom see? What is the effect on the pupil of this less personal form of delivering to him official information and directives about school affairs? Does such a communication system within a school have anything to do with emotional tensions of the teachers as well as the pupils? This last question may be particularly important in those cases where the sound system is equipped so that the central office may listen in to any classroom selected. At what grade levels and how effectively can sound systems be used with pupil operation and its attendant possibilities for incidental speech education?

3. More research needs to be conducted in reference to the effects of the classroom teacher's speech on the speaking habits of her pupils and on their attitudes toward school work in general. Do pre-primary and primary grade children with poor speech habits improve more rapidly under some teachers than under others when no directly applied speech training is given? What are the differences in the speech of those teachers in respect to rate, intensity, pitch, quality, distinctness of utterance, and the quantity of their verbal output? Are there other observable differences among teachers as to personality traits which may have a bearing on whether or not they improve their pupils' speech while conducting regular classroom work?

4. The literature on speech improvement is replete with statements to the effect that speech is a reflection of the personality, that it is a *vocal-equivalent of the mental and physical* states of the individual. When we consider speech as not only a means of communicating thought but also as a means of concealing thought, and when we think of a person's using both the content and the mode of his speaking to disguise his feelings, to what degree may we assume that a person reflects his real personality through his speech? As far as this author knows, there is no experimental evidence substantiating the idea that speech is a correlate of the personality.

5. It has been said rhetorically that if one cannot tell it, he does not know it. What is the relationship between learning subject matter such as geography, history, and literature and having speech experiences in these areas? Would opportunities for oral expression in these subject fields under certain conditions provide a greater motivation and a greater achievement than would writing experience? To what extent and in what way can speaking experiences contribute to the pupil's acquiring command of fundamental processes? Would we, for example, get a higher achievement level in reading if pupils were encouraged from the start to do more talking about what they are learning to read instead of marking reading workbooks? It seems to this author that the whole field of speech activity as related to school achievement at all grade levels is one which could be fruitfully investigated further.

6. Some light could be thrown on the nature of the processes involved in extemporaneous public speaking, and in thought processes themselves if we were to examine some of the thousands of speech notes that speakers carry with them to the platform. The notes would

have to be studied along with the recordings of the speeches given; and some method would have to be devised to let us know at what times the speaker looked at them. It is a fact that no two speakers prepare for themselves the same kind of notes; their forms will vary widely. It is also true that some of the notes we are allowed to see after the speech has been given make us wonder how they ever served the purpose at all. Perhaps a study of such notes would tell us something about thought organization and recall during the speaking act when we analyze the written verbal cues that speakers design to call to mind the mental concepts they wish to express.

7. Since the emotional life of the developing child seems to have some effect on various phases of his speech activity, it is suggested that some sort of semantic research should be done on the use of profanity, taboo expressions, and interjections among children of various ages. Speech exists not only for the purpose of modifying the behavior of others, but it functions as an outlet for the emotions of the individual. What do these expressions of taboo language really mean in terms of the child's attitudes toward authority, toward the opposite sex, and toward himself? Do the reactions of adults toward such language on the part of the child condition his speech development as a whole? Will a traumatic experience, or series of experiences, in respect to forbidden words or phrases have a carry-over effect to other words with similar syllables?

More research needs to be done to understand the mechanisms behind a child's saying one thing and meaning another. In the classroom we sometimes see the child in a situation wanting to do a certain thing but saying that he does not want to, or he may say that he dislikes the teacher or his playmate, when in reality he feels just the opposite. Many studies have been made of the ways in which children project their feelings, desires, and motivations, but it is suggested that more research is needed in this area in which the child's everyday speech responses are used for analysis instead of the responses obtained in the controlled situations of the observation room.

8. The whole area of oral recitation needs to be studied in relation to the pupil's development of speech and his speaking personality. Perhaps we could learn something about the technique of asking questions of children and of drawing out their answers in such a way as to give them a greater preponderance of successful speech experiences than is often the case. Does the problem of stagefright take root in the child's life during these question and answer periods in which he faces a dual problem of adjusting his speech to the group and of saying things he is not prepared to relate? What would be the results if the children asked more of the questions and the teacher did more of the answering?

9. It is common for some parents and teachers to encourage children to learn and recite selections very early in life. In many Sunday schools it is the practice to have the child memorize biblical verses. Research is needed to find out more about the effect of such experiences on the child and his speech stability. What is the nature of the social load the child carries when he does such reciting? At what age level is it best to encourage these performances if at all; and what principles in handling them could be uncovered by experimental evidence?

10. What could we learn about the effect on the older child produced by his participation in school plays, operettas, and skits? These speech activities are extremely common in schools everywhere; and, in the main, the casting of children for parts seems to be dominated more by the teacher's desire for a successful production than by a careful consideration of the values which might accrue to the individual child. What are the effects on the child of having a part in the school play? How does it affect the older child's speech style? Do people tend to incorporate in their speech the lines

or phrases they have learned in a play? Do they incorporate in their regular speech the intonation patterns, facial expression, and bodily movement which they were taught in the play? Does participation in the school play perceptibly alter the student's personality?

11. Some speech teachers are still advocating singing as a means of improving speaking skills, especially in the areas of breath control, articulation, and voice quality. Are there some psychological relationships between singing and speaking which have been overlooked? Is there any transfer of training from the singing process or situation to the speaking process or situation?

12. There is need for research in the construction of speech aptitude tests and diagnostic speech tests. It occurs to the writer that as far as speech skills are concerned, paper and pencil tests will never serve the purpose except perhaps in testing certain abilities which may have a correlation with speech skills. Valid and reliable speech tests, when they are constructed, will probably have to be listening tests on the order of Seashore's records for the diagnoisis of musical ability. Since the child learns speech by listening to it, it is possible that if we wish to measure objectively his speech progress and diagnose his shortcomings, we could do it by testing his listening discrimination and discernment by means of standardized recordings. Such recordings might even do a better job of testing some aspects of vocabulary development than the standardized multiple-choiced printed tests, since the sound of a word is not the same as the looks of it on a printed page. Every auditory component of speech could be tested by standardized recordings on the assumption that what the individual may not hear or notice in the speech of others he may not have established in his own speech. However that may be, his awareness and recognition of speech components could certainly be tested. Such tests would, of course, have to be presented to the subject well above his hearing acuity threshold so that slight hearing loss would not materially affect the results of the test.

Albums of such records might be developed which would test a wide number of speech elements including word choice and usage, logic and artistry in phrasing (word grouping), emphasis, inflectional patterns and meaning, articulation of sounds, and even the logical development of points of argument or explanation.

This whole area of the diagnosis and measurement of speech abilities is one in which an upsurge of research is needed if we are to meet the needs of school children in speech education.

13. When students look up words in dictionaries, they usually can read what the words mean, but they frequently cannot dicipher the systems used to indicate how the words are pronounced. Some studies are in order to determine to what extent this is true, but it appears to be a question of the student's learning what diacritical symbols mean and how to use the key words which are only of value if the student knows exactly how to pronounce the key words themselves. There are several dictionaries which employ different systems of diacritical marks, thus complicating matters further. In addition, phonetic alphabets appearing in speech and English textbooks lack agreement and so add further confusion. What can be done to standardize such pronunciation marking systems for school use so that a student could learn early how to determine pronunciation and syllabic emphasis from printed symbols? Is part of the problem concerned with the teaching all through school of keys words through which all pronunciation would be indicated? Are we back again now to the question of teaching the phonetic elements of speech as such in the primary grades?

14. More studies ought to be made of conversational speech in view of the fact that by far the greatest proportion of the person's verbal output is conversational and not formal speech.

Since the study of speech is so justifiably concerned with the extent to which it can throw light on the social behavior of the person speaking, studies in conversation might have far-reaching educational implications.

In what ways does the speech of the trained speaker change when he is engaged not in a formal speaking situation but in spontaneous conversation? What are the individual differences in regard to conversational habits and patterns? Why do some people "make conversation" in preference to having mutual silence? What are the salient differences in the conversational patterns of children when compared with those of adults? Do children ask more questions of each other than do adults? To what extent do people register frank, motivated, responsive, and sincere conversation as contrasted with conversation that consciously attempts to be socially manipulative? What is the actual mechanism behind disagreement in conversational exchanges when the conversation is overheard and when it is not? What situations condition the talkativeness of children in conversation? What environmental factors determine the topics of conversation among children? How may we use what we learn about the child's conversation in his speech education program?

15. Some study should be made to see how instruction in lip reading would affect the speaking habits of normal hearing children. Would their developing awareness of the movement of the visible speech organs and their focus of attention on such activity cause them to develop more precise articulatory movements in ordinary speaking? It might also be of interest to find out how much lip reading the normal hearing person actually does without being aware of it.

Needed Research in Speech Pathology

The research literature in the area of speech defects, their symptoms, diagnosis, and treatment, is extensive. Probably the greatest amount of time and energy has been spent in investigating stuttering; and there is not much to show for a large part of it. This, however, is true of the research in any area. Lately there has been an increase in the amount of published material having to do with cleft-palate speech, but a great deal of experimental work needs to be done in devising better methods of speech training for those hare-lip and cleft-palate children who have received all that surgery has to offer them. Also, there has been a phenomenal increase of research work in problems of hearing impairment, in speech training for the acoustically handicapped, and in audiometric evaluation. The work in the field of hearing as well as that in the field of aphasia (loss of speech from brain damage) was greatly stimulated by war-time research in Army and Navy hospitals.

As this author sees it, too many research workers are following old lines of research; their thinking and their efforts are channeled too narrowly by the research findings and conventions of the past. What is needed is more creativity, more bold venture, without specifically constructed hypotheses for the research, if necessary. Though it may be heresy in the scientific world to say so, a great number of new discoveries and ideas have come to us by accident during the course of what seemed like wild, outlandish, blind investigation.

The field of speech pathology is not so far removed from general speech education as it may seem. It has probably been from the field of speech pathology that the greatest motivation for the scientific study of speech has come; and it is from speech pathology that we have learned a great deal about the normal development of speech. In fact, speech pathology has provided us with a direct avenue to the study of many forms of human behavior. Studies of abnormalities and their remedy are often more productive in the development of educational principles than are the studies of normalities alone. Developments in remedial reading, for

example, have taught us much about teaching reading to everyone. Our knowledge regarding the functioning of the human brain could not have been gained without the study of the defective brain. When we study speech deviations severe enough to be called defects, we evolve principles and methods that are applicable as well to the training of normal speaking persons.

Let us suggest a few problems in the area of speech pathology which need investigation:

1. It is an observed fact that distractions will help a stutterer during a given moment get out of a blockage in his speech. He often organizes for himself certain distraction devices to help himself. Sometimes he will whistle, stick out his tongue, jerk his head, squint his eyes or frown, or suddenly change his mind about the word he was going to say and utter another. If we subject him to mild pain or discomfort, speak along with him, or put a buzzing sound in his ear, he may be distracted enough to recover more quickly from his spasms. Why do such distraction devices work for a while and then, when he gets used to them, cease to be of any help at all? What is the principle behind distraction as a momentary aid to the stutterer?

2. If, and when, adequate means are developed for the measurement of attention, would we find stutterers to have greater distractability than normal speakers? Do they have difficulty focusing attention and concentrating on various tasks? Could studies of attention in stuttering individuals be correlated with personality studies around a tentative hypothesis that neurotic tendencies, if they exist, would militate against the person's ability to focus and sustain attention?

3. There is no conclusive evidence as yet that stutterers have basic personality disturbances which might account for their speech problem. While more research is needed concerning emotional factors connected with stuttering, the outcomes of all such personality studies seem to have been in doubt because of the limitations of the testing instruments and methods. First, we had better develop better tests than we now have, and this includes the projective techniques such as the Thematic Apperception Tests and Rorschach's ink-blots. We may as well recognize the fact that the validity of every known personality test is open to question.

4. Investigators have studied the development of speech in the individual and have gathered much data concerning the acquisition of speech sounds from the time of infancy on. Similarly, many studies have been made of speech improvement on the part of individuals in various age brackets. Some interesting data might be obtained from studying speech deterioration under certain conditions. What changes take place in speech as an individual loses his hearing? Experimental conditions could be set up in which subjects would not hear themselves speak, a sort of artificial deafness induced by means of noise effects. An objective analysis of the acoustic changes in speech resulting from the experimental deprivation of hearing could be obtained from kymographic and oscillographic recordings. Such investigations might throw some light on the function of the tactile and kinaesthetic senses of speech organs in learning and regulating speech. It might provide more useful data than we could obtain from the speech of those who have become deafened later in life, since comparisons between speech with hearing and speech without hearing could be made in the same individual.

5. It has been thought that one reason why children misarticulate speech sounds is that their parents speak too rapidly, not loudly enough, or not distinctly enough. Research should be done regarding the speech habits and speech activity of parents who have children with functional articulatory defects or with delayed speech.

6. Some of the recent experiments with the critical frequency at which various individuals fuse light-flicker might be interesting if applied to persons who stutter. Since the ability to fuse such flicker at certain critical frequencies so that it appears to be a steady light seems to be a central and not a peripheral process, something might be learned in regard to brain activity and stuttering. Although some studies in *phi phenomena* have been made with stutterers, the results have not been at all clear.

7. Attempts should be made to get more introspective information from those who have various types of speech defects. It will have to come, of course, from those who are above average intelligence and who are capable of penetrating self-analysis. All of the basic information we have about speech defects and their accompanying emotional problems has come from what we have observed in those who have the defects. It is suggested that much of what we are not able to observe might be learned by cultivating the introspective abilities of speech defectives.

The purpose of this article has been to present some thinking which might stimulate some new and needed research. It has not attempted to review the extensive research which has already been done. When a research problem is proposed, there is usually more than just a problem being suggested; a train of thought may be started. The researcher looking for something of significance to investigate may discover that his own mind revolves too much in the same orbit as he mulls over the type of problems he would like to answer. This author hopes that some of the suggestions for research in speech which he has presented will at least help start a train of thought in the mind of the reader to the end that it may lead to even better problems than the ones specifically proposed here.

Needed Research In Listening

HAROLD A. ANDERSON*

We have always spoken perhaps a thousand times more words than we write and listened to a thousand times more words than we read. But modern developments in mass media of oral communication—the radio, the sound motion picture, and now television—and the increase in the amount of group discussion, public forum, and debate have made the spoken word the most powerful medium of communication the world has ever known. And this medium may prove to be the most dangerous, unless each rising generation is taught how to listen. The human ear is a willing subject and an easy prey for those who would use the spoken word for evil purposes. Yes, as Wendell Johnson has said:

"...As the world grows more ominously voluble by the hour, the words we hurl at each other are no more confusing and maddening, or clarifying and calming, than our habits of listening permit them to be. Until they reach our ears they are mere sound waves, gentle breezes, harmless as a baby's breath. It is through the alchemy of listening that they become transformed into the paralyzing and convulsant toxins of distrust and hate—or the beneficent potions of good will and intelligence".[1]

Centuries before man learned to communicate with written symbols, he communicated with his fellowmen by word of mouth. His literature, even, was kept alive by oral tradition. Even today millions of people in some parts

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[1]Wendell Johnson, "Do You Know How to Listen?" *Etc.: A Review of General Semantics*, XII (Autumn, 1949), 9.

of the world rely almost wholly on the spoken word. In our early schools in this country, oral instruction was the dominant method of instruction. Indeed, for ages listening was the primary means possessed by man for gaining an education and for enlarging his own experiences vicariously. Then, listening was an indispensable art; the ear held precedence over the eye. This point was well put by Bonaro W. Overstreet who said:

"The individual who in the long preliterate stages of history, had no keen ability as a listener must have remained a prisoner within his own small cell of experience".[2]

With the invention of the printing press five centuries ago, listening slowly gave way to the printed page. Through the centuries the Western World became increasingly print-minded, and the major burden of obtaining an education was placed on the eye. In time, listening and the culture of oral tradition were largely replaced by print and by the practice of measuring literacy in terms of reading. Now, in less than a quarter of a century mass media of oral communication have returned to the ear its former preeminence.

This recent shift from the eye back to the ear is in itself no tragedy. The tragedy lies in the fact that only the eyes are trained. Except in isolated instances, virtually the only instruction in listening that children and young people receive in the schools is the quite useless admonition to "pay attention" and to "listen carefully". Listening, at all educational levels, has been the forgotten language art for generations.

Fortunately, there are a number of indications that teachers and other educational workers now recognize the need for teaching the art of listening. In recent years a sharply increasing number of articles and studies in the field of listening have appeared, and teachers in a growing number of schools are giving systematic instruction in listening. Almost every convention of teachers of English today includes in its program one or more papers or panels on the subject. Indeed, interest in the teaching of listening appears to be gaining the proportions of a movement.

Unfortunately, however, progress in the teaching of listening is hampered by the paucity of research in the field. In comparison with reading, virtually no research has been done in listening. William S. Gray reports in the 1950 edition of the *Encyclopedia of Educational Research* that 2,700 studies in reading were published between 1881 and 1945. In the five-year period from 1941-45 alone, 462 studies in reading appeared. It is estimated that the total number is now well over 3,000. The present writer has prepared an exhaustive bibliography of articles, monographs, and theses in the field of listening. The total is no more than 175 titles. Of these, about 50 may be loosely classified as research.

As a result of this dearth of research, many questions relating to the teaching of listening remain unanswered. This article attempts to identify some of those questions and is intended to stimulate research needed to answer them. The questions and indications of needed research are grouped into seven categories.

1. *How much time is devoted to listening?* —One of the accepted principles of curriculum-making is that pupils ought to be taught to do well those things which current living demands of them. Hence curriculum-makers undertake studies of the kinds of activities in which children, young people, and adults engage and attempt to ascertain the amount of time devoted to them. No one, of course, is likely to argue that the amount of time devoted to a given activity should serve as the sole or even the most important measure of its importance, but such

[2]Bonaro W. Overstreet, "After This Manner, Therefore, Listen....", *Wilson Library Bulletin*. XX (April, 1946), 598.

studies do serve useful purposes in the task of defining the objectives of instruction.

Our insight into and appreciation of the place which listening occupies today in the school and out-of-school lives of children and young people would be greatly enhanced were more facts available concerning the amount of time people devote to listening. It is important to know not only the total amount of time but also the time devoted to the various kinds of listening activities. Children and adults listen to conversation and group discussion; to sermons, travel talks, debates, and public addresses of many kinds; to a wide variety of radio programs and sound motion pictures; to dramatic presentations; and to talks by teachers and fellow students. Many other types of listening situations will come to the reader's mind.

Very few studies of this kind have been made. Among the first were those by Paul T. Rankin (28, 29, 30, 31) who reported on the relative amount of time devoted to listening as compared with the other language arts. He found that adults spent 45 per cent of their communication time in listening, 30 per cent in speaking, 16 per cent in reading, and 9 per cent in writing. In a more recent study, Miriam E. Wilt (47, 48) found that for 530 children at the elementary school level the median daily listening time was 158 minutes. These studies indicate that listening is a major activity for both children and adults. Miss Wilt found, however, that teachers may not be fully aware of the role which listening plays in the pupils' learning experiences. When teachers were asked to estimate the amount of time children devote to listening, they underestimated the amount by almost 50 per cent. In all probability far more of the instruction which goes on in the classroom comes through listening than most teachers suspect.

We need, then, answers to a number of questions. How much time do children, young people, and adults devote to listening? What proportion of this listening time is devoted to conversation, group discussion, talks of various kinds, radio programs, and all the various types of listening situations? Does the amount of time devoted to listening increase or decrease as children progress through school? What is the relation of the amount of time devoted to listening to such other factors as reading interests, hobbies, success in school, intelligence, personality? Are the listening activities in school appreciably different in kind from those out of school?

2. *How important is listening in modern life?*— Quantitatively speaking, listening is without doubt the most important of the four language arts. There are, however, other criteria for assessing the importance of an activity. One is its role or influence in the lives of men. A number of articles have appeared in recent years which draw attention to the effects, both good and bad, of the increased amount of listening brought about by the phenomenal development of mass media of oral communication. Some of these articles warn of the potential dangers in this mass listening. There is fear that these unlicensed teachers—the radio, the motion picture, and television—will capture the hearts and minds of young people and adults and employ the spoken word for evil purposes.

At present we have very little factual information about the way in which people are affected through listening. We need answers to questions such as these: To what extent and in what ways are the lives of people affected today by their listening? What information do they now obtain largely through listening? To what extent are their notions about food, nutrition, marriage and family relationships, political ideals, personal health, and moral virtues obtained through radio listening and to the impact of the spoken word on television and in the motion picture? To what extent may misconceptions or perverted notions about many aspects of human living be traced to the

influence of these mass media of oral communication? To what extent do they increase public enlightenment of the important social, economic, and political issues of the times? In what degree does this mass listening make for unity and social solidarity, and in what degree does it produce hysteria, confusion, and discontent?

It must not be assumed from the foregoing questions that all listening is confined to the mass media. Children and young people listen to sermons and to their Sunday school teachers; they listen to their teachers in school and to one another; they listen to one another on the playgrounds and in the city streets. Wherever they are, they are listening a great part of every waking hour. What do they learn? What is the effect of this listening upon their value systems, their ideals, their attitudes toward their fellowmen, their moral codes, their understanding of the physical and biological universe? Certainly it would be naive to assume that their education comes solely, or perhaps even largely, from the printed page.

We need information, too, about the kinds of activities in modern life which demand a high degree of skill in listening. In what situations is the major burden placed on the ear? Obviously, the radio is the supreme instance. We also need to know how to listen to the oral element of television and motion pictures. We need to know how to listen to conversation, to group discussion, to talks, and to drama. Teachers take the importance of these listening situations for granted. But how much study has been given to the importance of listening skills for the salesperson on the job, for the foreman in a factory, for the teacher or preacher, for the soldier receiving orders, for the secretary taking dictation, to mention only a few? Studies are needed to ascertain the ways in which listening skills are needed in all walks of life.

A sound program of instruction in the art of listening must await in large part answers to questions such as those raised in the foregoing paragraphs.

3 *How well do pupils listen?*—The periodic measurement of the reading ability of pupils at all educational levels through the administration of standardized tests is now almost universal in this country. Teachers and school administrators know a great deal about the reading abilities and disabilities of their pupils. But they know virtually nothing about the listening abilities and disabilities of their pupils. Why? One reason may be that we have been insensitive to the importance of listening as a language art and hence have not thought it necessary to be concerned about the level of listening competence. The more immediate reason is that no tests of listening ability have been available.

There is urgent need today for research in listening performance. How well do children, young people, and adults listen? Are there wide individual differences in listening ability? If so, what are these differences? Do pupils improve in listening competence from grade to grade, or do they get worse as they grow older? What is, or should be, normal performance at each grade level? Can listening norms be established? What weaknesses or disabilities do poor listeners manifest? What percentage of pupils are deficient in hearing acuity? What is the correlation between listening ability and intelligence? Between listening and school achievement? Between listening ability and vocabulary? How can poor listening habits be identified and detected? What are the characteristics which differentiate the good listener from the poor listener? What is the relation between listening performance and such personality factors as emotional stability, social adjustment, and mental health? To what extent are day-dreaming, inattention, and wandering attention due to deficient hearing? Are there sex differences in listening ability? How widely do pupils vary in their ability to learn through lis-

tening? What proportion of pupils are so retarded in listening skills as to require remedial instruction?

Obviously, answers to the questions raised above will be available only after many studies have been made. Furthermore, these studies can be made only when adequate measuring instruments are available. The most serious need today is a battery of tests which will produce reliable measurements of the several skills, abilities, and aptitudes which make up the complex art of effective listening. We need tests of hearing acuity, listening comprehension, listening vocabulary, listening interpretation, rate of listening, to mention a few. Fortunately, a beginning has been made in the construction of such instruments. Reasonably good tests of hearing acuity have been available for some time. Recently, some attempts have been made to construct objective tests of listening. One of the most promising is a diagnostic test of listening comprehension constructed by James I. Brown (6, 7) as a doctoral dissertation in 1949. The test is being published by the World Book Company.

4. *What is the nature of listening as a language art?*— The more than 3,000 studies which have been made in the field of reading have given us considerable understanding of the physiology, psychology, and sociology of reading. We have no such body of knowledge about listening. The mental processes involved in listening are complex and not very well understood. Until research provides more guidance, instruction in the art of listening will be based on hunches.

The kinds of research needed in this area are suggested by such questions as these: What is the psychology of listening? What higher mental processes are involved? What actually goes on during listening? Are the processes similar to or different from those in reading? If different, in what ways? What are the elements of good listening? Can the good listener be identified and decribed as we now identify and describe the good reader? What skills or abilities or attitudes are important in listening? How important are auditory acuity, vocabulary, knowledge of grammar, general linguistic competence? What factors make for good listening comprehension? Ralph G. Nichols (26, 27) has made a good beginning in identifying these factors. Is selective listening, the ability to listen only to that which one wishes to hear, a desirable listening faculty? If so, can it be developed? What is the essential difference, psychologically, between mere hearing and actual listening?

Another cluster of questions relate to kinds of listening and listening situations. Are skills needed for listening to expository speech the same as those needed for narrative or argument or persuasion? Is it more difficult to comprehend one form of oral discourse than another? How does effective listening to lyric poetry differ from listening to directions on how to make a box kite? How validly may listening be differentiated into such categories as comprehensional, discriminative, appreciational, critical? What different skills might be needed in listening to political or partisan speeches, radio advertising, group discussion, conversation, drama, propaganda? What factors in face-to-face listening differ from those of radio, sound films, and television?

There is need, also, for research to ascertain the relation between listening competence and intelligence and between listening and school achievement. A few studies (30, 38, 42) have been made, but the findings are minor as compared with the importance of the questions. We need to know whether intelligence is a factor in language competence quite independent of the mode of presentation. Do slow pupils learn more readily, as is sometimes alleged, through listening than through reading? Do bright children know how to listen better than the slower ones? Do pupils who get along well

in school, as measured by school marks, know how to listen better than those who do less well? What is the relation between listening competence and vocational success?

5. *What are the similarities and differences between listening and reading?*— Reading and listening are the receiving ends of the communicative process. They are assimilative skills. They are the means by which, through language, others may communicate with us, the means by which our experiences may be extended vicariously in almost limitless measure. In what ways are these two language arts similar? In what ways different?

There are some ways in which they are clearly different. The ear is the receiving organ in listening, and the eye in reading. In listening, the speaker sets the pace of communication; in reading, the reader sets it. The reader may pause to reread a word, a sentence, or a longer passage. He may stop to think about what he has just read, letting his mind follow a number of voluntary excursions of interpretation, association, and implication. The listener must weigh some bit of evidence or proposal against his own information or opinion while listening to the speaker go on to make his point. He cannot pause to think through a metaphor, or marshal his own ideas in silent debate. Most of our listening does not permit the reflective processes so valuable in reading. Not so in listening. The speaker's pace or the relentless sound track in motion pictures hurries the listener along faster than he can absorb what he hears or moves so slowly as to produce boredom and ennui. Listening is usually a socialized activity while reading is, for the most part, a personalized one. Furthermore, in oral communication the listener has the advantage of both the style of the speech itself and the personality of the speaker. On the other hand, sometimes, because of the speaker's manner or appearance, the listener may reject an idea or fact which he would be quite ready to accept in print.

Presumably, too, listening and reading have much in common. Language is common to both. The same words, in large part, are used in both forms of communication. Sentence patterns are much alike. The purposes of communication are much the same. Many other similarities will come at once to the reader's mind.

But the question of similarities and differences is not as simple as it may seem at first thought. In the first place, no one has yet thoroughly analyzed these differences and similarities from physiological, psychological, and sociological points of view. In what ways are the two forms of assimilative communication essentially alike and in what ways are they significantly different? What is the difference in the size and nature of one's listening vocabulary as compared with one's reading vocabulary? To what extent does one stem from or increase the other? Do people rely characteristically upon listening for certain kinds of information and satisfactions and upon reading for others? What is the relative effectiveness of the two media for learning purposes? Do people understand what they hear better than what they read? Do people remember better what they read or what they hear? Are people more critical toward what they read than to what they hear? Does instruction in one reinforce the other, or may abundant practice and competence in one weaken the other? If reading is found to be superior to listening in learning, is it because of the inherent superiority of reading or because pupils have been taught how to read but not how to listen? If listening should be found to be superior, may it be because listening is the more common activity? Questions like these remain largely unanswered. Answers to these questions will not be easy to find. Many of these problems can be studied only by trained research workers. It is hoped that advanced students and faculty in graduate departments of education and psychology will pursue them.

It is in this aspect of the teaching of listening that most of the research to date has been done. It is not the purpose of this article to review the existing research in listening. Readers who are interested in gaining a background for undertaking studies in the relation between listening and reading will find studies by Corey (12), DeWick (13), Erickson and King (14), Goldstein (15), Greene (16), Knower, Phillips, and Koeppel (19), Larsen and Feder (21), Rulon and Others (33, 34, 35), Russell (37), Selover and Porter (38), Sims and Knox (39), Spache (40), Stump (42), Tireman and Woods (43), Worcester (49), and Young (52) useful.

6. *What factors influence the quality of listening in and out of school?*— We have known for a long time that a variety of factors influence the quality of a person's reading. Even such seemingly minor matters as length of line, spacing between lines, margins, size of type, quality of paper, color of binding, paragraphing, and side and center headings affect reading. Vocabulary load, sentence structure, and organization of ideas play a much larger role. The great progress which has been made in recent years in the preparation and production of reading materials for children, young people, and adults alike stems in large part from studies of these and other factors affecting reading rate, comprehension, and interpretation.

Certainly there must be comparable factors affecting listening, but little knowledge is available as to what those factors are or how important they are. Common sense would suggest that one's listening comprehension is affected by the speaker's voice quality, his personality, his speaking manners, the organization of his ideas, the absence of noises and other disturbances, the temperature and condition of the air in the room, to mention some of the more obvious factors.

The research needed in this area is suggested by these questions. What factors make for good listening situations? How important are such environmental factors as physical comfort of the listener, absence of noises and other disturbances, a congenial atmosphere? How important is the quality of the speaker's performance, that is, his voice quality, mannerisms, personality, rate of speaking, choice of English, method of appeal, organization of ideas? How influential upon the quality of listening is the speaker's reputation, authority, affiliation, sponsor? What effect do the listener's interest, motivation, and purpose have on his listening? What effect does the listener's emotional state have on his listening performance? What is the attention span of the average listener? What barriers stand between the speaker and listener?

To what extent do unfavorable factors in the listening situation, such as noise and other distractions, lack of motivation, and poor speaking, develop inattention, daydreaming, passive or marginal listening, and even an immunity to listening?

If we knew more about what makes for good listening, perhaps it would be possible to develop a score card comparable to a readability formula against which we could measure the adequacy of any listening situation. In the field of reading, we are able to say with some assurance what makes a book readable. To date, we have little basis on which to appraise a listening situation. Until we do, teachers are not likely to do much to improve the listening climates of their classrooms.

7. *Can the art of listening be successfully taught?*— It is difficult to account for the fact that the art of listening is taught in very few schools today at any educational level. For several years the writer has corresponded with hundreds of teachers of English throughout the country in an attempt to identify places where systematic instruction in listening was going on. Only a small number of places appear to be making serious and concerted efforts to improve the quality of listening of their pupils. Perhaps the reason for this lack of attention to an im-

portant language art is the dearth of reasearch in methods of teaching listening. The relatively high quality of instruction in reading, spelling, handwriting, arithmetic, and other basic subjects may be attributed in large part to the objective studies in methods of teaching made in these fields. Certainly it is fair to assume that the art of listening can be taught. We can assume that listening habits can be improved through direct instruction.

How valid is the assumption that listening habits can be improved? What particular listening skills are most amenable to training? Does practice in listening, without guidance, result in bad as well as good habits? Does instruction in reading facilitate listening? What is the transfer of habits from reading to listening and vice versa? What classroom activities and what kinds of mechanical equipment are best suited to improve listening? Are present "listening climates" in and out of school conducive to the development of good listening habits? Do teachers set listening situations in the classroom which call for attentive and critical listening? What can teachers do to provide listening activities which give practice in good listening habits and which serve to correct poor habits? Can listening best be taught directly and systematically or incidentally and obliquely?

It is hoped that teachers at all levels will attack the problems of devising effective means of teaching children, young people, and adults how to become better listeners. This can be done only by experimenting with a variety of methods and objectively evaluating their effectiveness. There is here, as in all the categories discussed in the foregoing sections, a wide, open field for educational research.

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